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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,398	08/05/2003	Mark Stephen Edwards	AD6606 US DIV I	9155

23906 7590 05/13/2005

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WILMINGTON, DE 19805

EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,398

Applicant(s)

EDWARDS ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species I: which appears to read on claims 1-6 and 12, directed to means for attaching the wrap filaments with base string and application of energy to the base string.

Species II: which appears to read on claims 7 and 8, directed to means for attaching the wrap filaments with base string and solvent or adhesive.

Species III: which appears to read on claim 9, directed to means for attaching the wrap filaments with application of thermoplastic polymer.

Species IV: which appears to read on claims 10 and 11, directed to means for attaching the wrap filaments with application of energy to the wrap filaments.

Species V: which appears to read on claim 11, directed to means for attaching the wrap filaments with application of solvent or adhesive to the wrap filaments.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are no generic claims.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

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Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Tamera Fair on 5/3/05 a provisional election was made with traverse to prosecute the invention of Species I, claims 1-6 and 12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards et al. (U.S. Patent 5,547,732).

Edwards et al. teach an apparatus capable of continuously making a bristle subassembly. The apparatus of Edwards et al. comprises **a mandrel having three, four, or more sides and having moving cable supports running the length of the mandrel on each exterior corner of the mandrel** (30, 32, 136, and 136 of Figure 1 and Column 3, lines 39-41 and 49-60 and Column 5, lines 62-64), **a wrapping means having a tension adjusting means** (24 and 26 of Figure 1 and Column 3, lines 30-39) capable of continuously wrapping at least one polymeric filament under controlled tension by rotating around the axis of the mandrel at a controlled rate to form a

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wrap of polymeric filaments where the wrap of polymeric filaments is supported and moved along the mandrel by the moving cable support, **a string feeding means** (shown only by 32a in Figure 1 and Column 6, lines 1-3) capable of feeding at least one base string outside of the wrap of polymeric filaments to a selected portion of the mandrel as required to form the subassembly while the wrap of polymeric filaments is being moved at least a portion of the length of the mandrel by the moving cable supports, **an ultrasonic wave bonding means positioned adjacent to the mandrel and having an opening** (42 of Figure 1 and Column 4, lines 1-4 and Column 6, lines 3-5 and 49-55 and Column 7, line 1) capable of operating at 20-70 kHz, bonding the base string and polymeric filaments of the wrap together by simultaneously pressing the base string in contact with the polymeric filaments of the wrap and applying energy to the base string and polymeric filaments of the wrap to partially melt at least one of the base string and polymeric filaments of the wrap, and maintaining the base string in contact with the polymeric filaments of the wrap without allowing the base string to reposition itself, and **a cutting means** (44 of Figure 1 and Column 4, lines 9-14) capable of cutting the wrap of polymeric filaments at a point downstream of where the polymeric filaments of the wrap are bonded with the base string.

It is noted the limitations in claims 1-4 regarding the material worked upon by the apparatus and the intended use of the apparatus do not further limit the claims other than the apparatus must be capable of performing the intended use and must include any structural limitations required by the intended use (See MPEP 2114 and 2115).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. and optionally in view of Cercone et al. (U.S. Patent 5,680,739).

Edwards et al. is described above in full detail. Regarding the means for feeding the base string, it is noted a means for feeding the base string appears intrinsic to that depicted in Figure 1 of Edwards et al. such that the claim limitations are met. In the event the claim language is seen to require a feeding guide tube for the base string the following rejection is set forth. Edwards et al. are silent as to a specific means for feeding the base string. It would have been obvious to one of ordinary skill in the art at the time the invention was made to supply the base string to the mandrel taught by Edwards et al. by using a guide tube as well known in the art as shown for

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example by the optional reference to Cerccone et al. to accurately supply the base string to the apparatus.

Cerccone et al. are exemplary in the art of the well known use of a guide tube to supply a string to an apparatus (68 of Figure and Column 6, lines 4-8).

Allowable Subject Matter

10. Claim 12 is allowed.

11. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest an apparatus as claimed including a moving endless cable support on each corner of the mandrel, each moving endless cable support runs along the corner of the mandrel protruding outward from the intersection of the two side planes of the mandrel which form the corner of the mandrel and **runs in an opposite direction in a recessed channel in the mandrel located on a diagonal side of the mandrel from said corner** and does not protrude into the plane of the mandrel side.

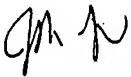
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

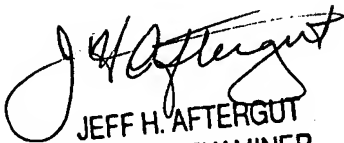
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goff



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